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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/645,035

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Michael E. Ring

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EXAMINER

BURCH, MELODY M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/645,035	Applicant(s) RING ET AL.	
	Examiner Melody M. Burch	Art Unit 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-7, 9, 11-13, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6792704 to Johnson in view of US Patent 6116385 to Ring.

Re: claim 1. Johnson shows in figures 1 and 2 an actuating member capable of being used for a railway vehicle brake assembly, such vehicle brake assembly having an air bag actuator 1 incorporated therein, said actuating member comprising: a first substantially vertically disposed plate like member or one of elements 20, said first substantially vertically disposed plate like having a first substantially planar surface engageable, via intervening elements 18(b), with a first surface of a second substantially vertically disposed plate like member or other of elements 20 attached to such air bag actuator, a substantially horizontally disposed plate like member 18(b) connected to the first substantially vertically disposed plate like member adjacent a bottom edge thereof and extending substantially perpendicular to the first planar surface of the first vertically disposed plate member for shielding at least a first portion of the air bag actuator from foreign material as shown, and a means 17 connected to a radially

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opposed second surface of the first vertically disposed plate like member via intervening elements for securing the actuating member to a control linkage 5 of the assembly.

Johnson is silent with regards to the vehicle brake assembly being a railway vehicle brake assembly.

Ring teaches in figures 1 and 3 the use of a brake assembly being in the form of a railway vehicle brake.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified vehicle brake assembly of Johnson to have been a railway vehicle brake system, as taught by Ring, in order to provide a means of controlling movement between components of a rail vehicle to improve the feel of the ride on the rail vehicle.

Re: claims 2 and 3. Johnson, as modified, shows in figures 1 and 2 of Johnson wherein the actuating member further includes a first plate like member 19 connected to an upper surface of the substantially horizontally disposed member via intervening elements and to the first planar surface of the first substantially vertically disposed plate like member adjacent a first side edge thereof and extending substantially perpendicularly to at least the substantially horizontally disposed member for shielding at least a second portion of such air bag actuator from the detrimental extraneous foreign material and for providing added strength between the first substantially vertically disposed member and the substantially horizontally disposed member. With regards to claim 2, the second plate like member is the other element 19 shown behind element 4 in figure 2.

Re: claim 5. Johnson, as modified, shows in figure 1 of Johnson the means 17 including at least one plate member 17 having an aperture formed therethrough shown surrounding element 12 and a pin member 12 disposed in the aperture for securing the at least one plate member to such control linkage.

Re: claim 6. Johnson shows in figures 1 and 3 an apparatus for mounting an air bag actuator to at least one brake beam, the air bag actuator having at least one inflatable air bag spring 3, the apparatus comprising: a first substantially vertically disposed plate like member or one of elements 20 having a planar surface portion for engagement with a substantially planar surface portion of a second substantially vertically disposed plate like member or the other of elements 20 connected to such air bag actuator, the first substantially vertically disposed plate like member exposing at least a first portion of an exterior surface of such at least one inflatable air bag spring to an atmospheric operating environment characterized by a presence of detrimental extraneous foreign when such car mounted brake assembly is in use, a guide means 18(a) directly connected to and disposed closely adjacent a first outer edge of and substantially perpendicular to the planar surface portion of the first substantially vertically disposed plate like member for guiding and alignment during reciprocal motion of such air bag actuator and a securing means 12,17 connected to the first substantially vertically disposed plate like member via intervening element such as element 13 for enabling attachment of the apparatus to a rigid structure.

Johnson is silent with regards to the vehicle brake assembly being a railway vehicle brake assembly.

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Ring teaches in figures 1 and 3 the use of a brake assembly being in the form of a railway vehicle brake.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified vehicle brake assembly of Johnson to have been a railway vehicle brake system, as taught by Ring, in order to provide a means of controlling movement between components of a rail vehicle to improve the feel of the ride on the rail vehicle.

Re: claim 7. Johnson, as modified, teach in figures 1 and 2 of Johnson, the limitation wherein the apparatus includes a second guide means 18(b), the second guide means directly connected to and disposed closely adjacent a second outer edge of and substantially perpendicular to the planar surface portion of the first substantially vertically disposed plate like member for guiding and alignment during reciprocal motion of the air bag actuator.

Re: claim 9. Johnson shows in figures 1 and 2 an air spring actuator assembly, the air spring actuator assembly comprising: at least one air bag spring 3 having at least a first portion of an exterior surface exposed to an atmospheric operating environment characterized by a presence of detrimental extraneous foreign material during use of the air spring actuator assembly, a first substantially vertically disposed plate like member or one of elements 20, the first substantially vertically disposed plate like member having a first substantially planar surface engageable with a first surface of a second substantially vertically disposed plate like member or the other of elements 20 attached to the at last one air bag spring, a substantially horizontally disposed plate like

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member 18(b) connected to the first substantially vertically disposed plate like member adjacent a bottom edge thereof and extending substantially perpendicular to the first substantially planar surface of the first substantially vertically disposed plate like member for shielding the at least said first portion of the exterior surface of the at least one air bag spring from the detrimental extraneous foreign material, a means 4 or elements 19 in front and back of element 4 connected via intervening elements to a radially opposed second surface of the first substantially vertically disposed plate like member for securing the first substantially vertically disposed plate like member to a control linkage 6 of a vehicle brake assembly via intervening elements, a third substantially vertically disposed plate like member or one of elements 17 having a second planar surface portion for engagement with a substantially planar surface portion of a fourth substantially vertically disposed plate like member or other of elements 17 via intervening elements connected to the at least one air bag spring via intervening elements, a guide means 18(a) connected to and disposed closely adjacent a first outer edge of and substantially perpendicular to at least one of the first substantially planar surface and the second planar surface portion of a respective one of the first and the third substantially vertically disposed plate like member for guiding and alignment during reciprocal motion of the air bag spring and a securing means 12 or 35 connected to the third substantially vertically disposed plate like member for enabling attachment of the air spring actuator assembly to a rigid structure.

Johnson is silent with regards to the vehicle brake assembly being a railway vehicle brake assembly.

Ring teaches in figures 1 and 3 the use of a brake assembly being in the form of a railway vehicle brake.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified vehicle brake assembly of Johnson to have been a railway vehicle brake system, as taught by Ring, in order to provide a means of controlling movement between components of a rail vehicle to improve the feel of the ride on the rail vehicle.

Re: claims 11 and 12. Johnson, as modified, shows in figures 1 and 2 of Johnson the means for limiting reciprocal motion being in the form of a plate shown between the top of air spring 3 and the plate 18(a).

Re: claims 13 and 18. See the air inlet connected to the line on which elements 26 and 27 are located as shown in figure 2 of Johnson. The means for controlling volume of air includes element 26.

3. Claims 1-3, 5-7, 9, 11-13, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Ring and further in view of US Patent 6142480 to Streitman et al.

Johnson, as modified, is not explicit with regards to the operating environment being characterized by a presence of detrimental extraneous foreign material.

Streitman et al. teach in col. 1 the use of a railway vehicle brake being in the environment characterized by a presence of detrimental extraneous foreign material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a surrounding environment characterized by detrimental extraneous foreign material, as taught by Streitman et al., since it is old and well-known in the art that vehicles operate in an environment marked by detrimental extraneous foreign material such as vehicle emissions and other harmful byproducts output from other machines.

4. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Ring and further in view of US Patent 3768826 to Hickman.

Johnson, as modified, shows the vertically disposed plate member being attached to the horizontal plate member of the air bag actuator, but is silent with regards to the attachment resulting from apertures (through which fasteners pass).

Hickman teaches in figure 15 the use of a vertically disposed plate 105 having at least one aperture (shown corresponding to the apertures on element 119) for enabling attachment to a horizontally disposed plate member 116 by way of fasteners passing through the at least one aperture.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the means for enabling fastening of Johnson, as modified, to have included apertures, as taught by Hickman, in order to provide a functionally equivalent means of fastening two components to ensure proper operation of the device and two improve reliability.

5. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Ring and Hickman and further in view of Streitman et al.

Johnson, as modified, is not explicit with regards to the operating environment being characterized by a presence of detrimental extraneous foreign material.

Streitman et al. teach in col. 1 the use of a railway vehicle brake being in the environment characterized by a presence of detrimental extraneous foreign material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a surrounding environment characterized by detrimental extraneous foreign material, as taught by Streitman et al., since it is old and well-known in the art that vehicles operate in an environment marked by detrimental extraneous foreign material such as vehicle emissions and other harmful byproducts output from other machines.

6. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Ring and further in view of US Patent 4693486 to Pierce.

Re: claims 10 and 22. See the rejection of claim 9 for claim 22 and Johnson, as modified, shows a pair of elongated members 19, 19 or 17, 17 each of the pair of elongated member extending outwardly and substantially perpendicular to the first substantially vertically disposed plate, but is silent with regards to the aperture formed therethrough adjacent to and spaced from a distal end thereof.

Pierce teaches in col. 4 lines 36-39 the use of a member having an aperture formed therethrough.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the members of Johnson, as modified, to have

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included an aperture formed therethrough, as taught by Pierce, in order to provide a means of reducing the overall weight of the assembly.

7. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Ring and Streitman as applied above, and further in view of US Patent 4693486 to Pierce.

Johnson, as modified, is not explicit with regards to the operating environment being characterized by a presence of detrimental extraneous foreign material.

Streitman et al. teach in col. 1 the use of a railway vehicle brake being in the environment characterized by a presence of detrimental extraneous foreign material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a surrounding environment characterized by detrimental extraneous foreign material, as taught by Streitman et al., since it is old and well-known in the art that vehicles operate in an environment marked by detrimental extraneous foreign material such as vehicle emissions and other harmful byproducts output from other machines.

8. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Ring as applied to claim 9 above, and further in view of US Patent 4846785 to Cassou et al.

Johnson, as modified, describes the invention substantially as set forth above, but does not include the limitation of a visual travel indicator.

Cassou et al. teach in col. 4 lines 2-5 the limitation of an actuator including a visual travel indicator or markings 20.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Johnson, as modified, to have included a visual travel indicator, as taught by Cassou et al., in order to provide a means of monitoring the operation of the air spring actuator to ensure that is inflating and deflating to acceptable levels.

9. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson and Ring in view of Streitman et al. as applied to claim 9 above, and further in view of US Patent 4846785 to Cassou et al.

Johnson, as modified, describes the invention substantially as set forth above, but does not include the limitation of a visual travel indicator.

Cassou et al. teach in col. 4 lines 2-5 the limitation of an actuator including a visual travel indicator or markings 20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Johnson, as modified, to have included a visual travel indicator, as taught by Cassou et al., in order to provide a means of monitoring the operation of the air spring actuator to ensure that is inflating and deflating to acceptable levels.

10. Claims 19, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art recited above the “improvement” phrase in claim 19 in view of Johnson.

The admitted prior art recites the railway environment, but the admitted prior art is silent as to the specific detail of the air spring actuator.

Johnson teaches in figures 1 and 2 an air spring actuator 1 comprising: a first substantially vertically disposed plate like member or one of elements 20 having a first substantially planar surface and a means 12 connected to the first substantially vertically disposed plate like member via intervening elements for securing the air spring actuator to such second control linkage 6, a second substantially vertically disposed plate like member or other of elements 20 having a second substantially planar surface and a means 19 connected to the second substantially vertically disposed plate like member for securing the air spring actuator to one of the beam 10, such second force transmitting member and a combination thereof, and at least one inflatable air bag spring 3 having a pair of substantially vertically disposed planar surfaces 17,17 for engagement with and attachment to the first substantially planar surface of the first substantially vertically disposed plate like member and the second substantially planar surface of the second substantially vertically disposed plate like member via intervening elements whereby selective inflation and deflation of the at least one inflatable air bag spring in a longitudinal direction enables a reciprocal motion thereof to move such control linkages and such force transmitting members for actuating and deactuating such brake beams wherein an exterior surface of the at least one inflatable air bag spring is at least partially exposed within such brake assembly to an atmosphere when such brake assembly is in use.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the air spring actuator of the admitted prior art to have included an air spring actuator, as taught by Johnson, in order to provide a means

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of maintaining the spring brake actuator in an exposed state to facilitate monitoring for maintenance purposes and to provide easy accessibility. With regards to claims 20 and 21, see element 18(a) as the means for shielding and guiding and aligning.

11. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art in view of Johnson and further in view of US Patent 6142480 to Streitman et al.

Admitted prior art, as modified, is silent with regards to the operating environment being characterized by a presence of detrimental extraneous foreign material.

Streitman et al. teach in col. 1 the use of a railway vehicle brake being in the environment characterized by a presence of detrimental extraneous foreign material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a surrounding environment characterized by detrimental extraneous foreign material, as taught by Streitman et al., since it is old and well-known in the art that vehicles operate in an environment marked by detrimental extraneous foreign material such as vehicle emissions and other harmful byproducts output from other machines.

Response to Arguments

12. Applicant's arguments filed 7/22/09 have been fully considered but they are not persuasive. Examiner notes that the amendments do not overcome the rejections. Particularly, the inclusion of the limitation of the members being "abuttingly engageable" fails to overcome the rejections since, first, the phrase includes functional language.

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The phrase “abuttingly engageable” simply means that the member is capable of abutting engagement. Examiner notes that any object with a surface is capable of abutting engagement. Second, Examiner maintains that as shown in Johnson, one member 20 is abuttingly engageable with another member 20 by way of element 18(b). Nothing in the claims requires *direct abutting engagement*. Accordingly, the rejections have been maintained.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb
November 22, 2009

/Melody M. Burch/
Primary Examiner, Art Unit 3657